

*Atty Docket HES 99.035U1C1*  
*(1391-40500)*

*Patent*

## REMARKS

### *Status of Claims*

Claims 21-40 are pending in this patent application.

### *August 27, 2003 Response to Office Action*

Applicants submitted an Amendment on August 27, 2003 in response to the Office Action of May 27, 2003 which contained the Statement of Common Ownership to overcome the prior art reference *Reddy* (U.S. Pat. No. 6,273,191). Such response was facsimile transmitted to the Office and confirmed receipt by an Auto-Reply Facsimile Transmission. The Examiner has, however, indicated the incomplete receipt of said response. A copy of the response is enclosed for the Examiner's reference.

### *35 USC 103(a) Rejection*

Claims 21-40 stand rejected under 35 USC 103(a) as obvious over *Reddy* (U.S. Pat. No. 6,273,191) alone or in combination with *Cowan* or *Gilbert*. *Reddy* is a prior art reference under 102(e), and therefore according to 103(c) is not available as a prior art reference wherein the subject matter was commonly owned. Applicants are again providing the statement of common ownership set forth below to remove *Reddy* as a prior art reference.

Given that the primary reference, *Reddy*, has been removed, Applicants respectfully submit that the Examiner has not established a prima facie case of obviousness as to the pending claims. Furthermore, in view of the inapplicability of *Reddy*, Applicants amended claims 21 and 36 in the August 27, 2003 response to recapture subject matter previously surrendered in an effort to distinguish over *Reddy*. It is Applicants' intent that the amended claims be given a full range of equivalents and not be limited in any way by previous amendments or remarks regarding *Reddy*.

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**STATEMENT OF COMMON OWNERSHIP**

Application number 09/854,857 (the present application) and the prior art reference *Reddy* (U.S. Patent 6,273,191) were, at the time the invention of Application 09/854,857 was made, owned by Halliburton Energy Services, Inc.

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### CONCLUSION

Applicants respectfully submit that the present application is now in condition for allowance. If the Examiner has any questions or comments or otherwise feels it would be helpful in expediting the application, he is encouraged to telephone Craig Roddy at (580) 251-3012.

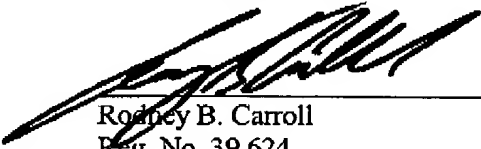
Respectfully submitted,

CONLEY ROSE, P.C.

Date:

7-14-04

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ATTORNEY FOR APPLICANTS

Atty Docket HES 99.035U1C1  
(1391-40500)

**IN THE UNITED STATES PATENT AND TRADEMARK OFFICE**

Applicants:	Lance E. Brothers et al	§	
		§	Group Art Unit: 1755
Serial No.:	09/854,857	§	
		§	Examiner: Paul D. Marcantoni
Filed:	May 14, 2001	§	
		§	Confirmation No. 1002
For:	CEMENTING IN DEEP WATER	§	
	OFFSHORE WELLS	§	

Mail Stop: Non-Fee Amendment  
Commissioner for Patents  
P.O. Box 1450  
Alexandria, VA 22313-1450

**CERTIFICATE OF TRANSMISSION**

Pursuant to 37 C.F.R. § 1.8, I hereby certify that this  
correspondence is being facsimile transmitted to the U.S.  
Patent and Trademark Office to Facsimile No. 703/872-  
9310 on 8-27-2003.

*Edith S. Shek*  
Edith S. Shek

**AMENDMENT AND RESPONSE**  
**TO OFFICE ACTION OF MAY 28, 2003**

In response to the Office Action dated May 28, 2003, please amend the above-identified application as follows.

**Amendments to the Claims begin on Page 2 of this paper.**

**Remarks begin on Page 6 of this paper.**

**Statement of Common Ownership begins on Page 7 of this paper.**

### AMENDMENTS TO THE CLAIMS

#### *Listing of Claims:*

21. (Currently Amended) A foamed cement composition having a set pumping time and a quick set at temperatures as low as about 32°F comprising:

a ~~cement consisting essentially of~~ calcium aluminate cement;

a ~~lithium salt~~ set accelerating additive;

a retarder;

water in an amount sufficient to form a foam; and

a mixture of cement composition foam forming and foam stabilizing surfactants present in an amount sufficient to facilitate the formation of and stabilize said foam.

22. (Previously Presented) The cement composition of claim 21 wherein said calcium aluminate cement has an alumina content of about 80% by weight of said cement.

23. (Previously Presented) The cement composition of claim 21 wherein said set accelerating additive is a lithium salt selected from the group consisting of lithium chloride, lithium carbonate, lithium sulfate and lithium hydroxide.

24. (Previously Presented) The cement composition of claim 21 wherein said lithium salt is lithium chloride.

25. (Previously Presented) The cement composition of claim 21 wherein said set accelerating additive is present in said composition in an amount in the range of from about 0.1% to about 1% by weight of cement therein.

26. (Previously Presented) The cement composition of claim 21 wherein said retarder is selected from the group consisting of citric acid, gluconic acid and tartaric acid.

27. (Previously Presented) The cement composition of claim 21 wherein said retarder is citric acid.

28. (Previously Presented) The cement composition of claim 21 wherein said retarder is present in said composition in an amount in the range of from about 0.5% to about 2% by weight of cement therein.

29. (Previously Presented) The cement composition of claim 21 wherein said water is selected from the group consisting of fresh water and salt water.

30. (Previously Presented) The cement composition of claim 21 wherein said water is present in said composition in an amount in the range of from about 40% to about 50% by weight of cement therein.

31. (Previously Presented) The cement composition of claim 21 wherein said gas is selected from the group consisting of air and nitrogen.

32. (Previously Presented) The cement composition of claim 21 wherein said gas is nitrogen.

33. (Previously Presented) The cement composition of claim 21 wherein said gas is present in said composition in an amount sufficient to foam said composition to a density in the range of from about 10 to about 12 pounds per gallon.

34. (Previously Presented) The cement composition of claim 21 wherein said mixture of foam forming and foam stabilizing surfactants in said composition comprises an alcohol ether sulfate ethoxylated with from about 3 to about 10 moles of ethylene oxide, an alkyl or alkene amidopropylbetaine and an alkyl or alkene amidopropyl dimethylamine oxide.

35. (Previously Presented) The cement composition of claim 21 wherein said mixture of foaming and foam stabilizing surfactants is present in said cement composition in an amount in the range of from about 1% to about 4% by weight of water in said composition.

36. (Currently Amended) A foamed cement composition having a set pumping time and a quick set at temperatures as low as about 32°F comprising:

a ~~cement consisting essentially of~~ calcium aluminate cement having an alumina content of about 80% by weight of said cement;

a set accelerating additive selected from the group consisting of lithium chloride, lithium carbonate, lithium sulfate and lithium hydroxide present in said composition in an amount in the range of from about 0.2% to about 0.5% by weight of cement therein;

a retarder selected from the group consisting of citric acid, gluconic acid and tartaric acid present in said composition in an amount in the range of from about 0.5% to about 1.5% by weight of cement therein;

water selected from the group consisting of fresh water and salt water present in said composition in an amount in the range of from about 40% to about 50% by weight of cement therein;

nitrogen gas present in said composition in an amount sufficient to foam said cement composition to a density in the range of from about 10 to about 12 pounds per gallon; and

a mixture of foam forming and foam stabilizing surfactants comprised of an alcohol ether sulfate ethoxylated with from about 3 to about 10 moles of ethylene oxide, an alkyl or alkene amidopropylbetaine and an alkyl or alkene amidopropyl dimethylamine oxide, said mixture being present in said composition in an amount in the range of from about 2% to about 3% by weight of water in said composition.

37. (Previously Presented) The cement composition of claim 36 wherein said set accelerating additive is lithium chloride.

38. (Previously Presented) The cement composition of claim 36 wherein said retarder is citric acid.

39. (Previously Presented) The cement composition of claim 36 wherein said water is salt water.

40. (Previously Presented) The cement composition of claim 36 wherein said mixture of foam forming and foam stabilizing surfactants comprises said ethoxylated alcohol ether sulfate in an amount in the range of from about 60 to about 64 parts by weight, said alkyl or alkene amidopropylbetaine in an amount in the range of from about 30 to about 33 parts by weight and said alkyl or alkene amiopropyldimethylamine oxide in an amount in the range of from about 3 to about 10 parts by weight.



**REMARKS**

Claims 21-40 stand rejected under 35 USC 103(a) as obvious over *Reddy* (U.S. Pat. No. 6,273,191) alone or in combination with *Cowan* or *Gilbert*. *Reddy* is a prior art reference under 102(e), and therefore according to 103(c) is not available as a prior art reference wherein the subject matter was commonly owned. Applicants are providing the statement of common ownership set forth below to remove *Reddy* as a prior art reference.

Given that the primary reference, *Reddy*, has been removed, Applicants respectfully submit that the Examiner has not established a prima facie case of obviousness as to the pending claims. Furthermore, in view of the inapplicability of *Reddy*, Applicants have amended the claims to recapture subject matter previously surrendered in an effort to distinguish over *Reddy*. It is Applicants' intent that the amended claims be given a full range of equivalents and not be limited in any way by previous amendments or remarks regarding *Reddy*.

**Change of Address**

Applicants respectfully bring to the Examiner's attention the change of address filed May 21, 2003, and hereby request that subsequent communications be sent to the corrected address.

**STATEMENT OF COMMON OWNERSHIP**

Application number 09/854,857 (the present application) and the prior art reference *Reddy* (U.S. Patent 6,273,191) were, at the time the invention of Application 09/854,857 was made, owned by Halliburton Energy Services, Inc.

CONCLUSION

Applicants respectfully submit that the present application as amended is in condition for allowance. If the Examiner has any questions or comments or otherwise feels it would be helpful in expediting the application, he is encouraged to telephone the undersigned at (972) 731-2288.

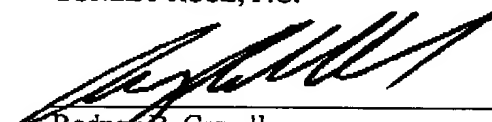
The Commissioner is hereby authorized to charge any fee associated with this communication or to credit any overpayment to Deposit Account 03-2769.

Respectfully submitted,

CONLEY ROSE, P.C.

Date: 8-27-03

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